

REMARKS

With entry of this amendment, claims 67 and 78 have been cancelled, leaving claims 66, 68-77, and 79-87 pending in this application. Of these, claims 66-72, 74-83, and 85-87 stand rejected, and claims 73 and 84 have been allowed. Based on the foregoing amendments and following remarks, reconsideration and allowance of this application is respectfully requested.

Drawing Objections-37 C.F.R. §1.83(a)

The drawings were objected to because the binary map designators (364) were not illustrated in the drawings. In response, Applicant has accordingly amended Figure 11 to specifically refer to the binary map designators 364. As such, Applicant respectfully requests withdrawal of the Examiner's objections of the drawings.

Claim Rejections-35 U.S.C. §103

Claims 66, 68-77, and 79-87 stand rejected under 35 U.S.C. §103 as being obvious over U.S. Patent No. 6,490,474 ("Willis '474") in view of U.S. Patent No. 5,820,568 ("Willis '568"). Applicant respectfully traverses this rejection, since neither of these references, alone or in combination, disclose, teach, or suggest the combination of elements required by these claims.

In particular, the Examiner indicated that the stars used to identify and mark the recording electrodes in Fig. 32 of Willis '474 were either "binary map designators" or could be modified to be binary map designators, as suggested in Willis '568. The stars illustrated in Fig. 32 of Willis '474, however, are not binary map designators, and there is no suggestion in Willis '568 that they can be made to act as binary map designators. A "binary map designator" is a designator, the existence of which indicates that the electrode falls within a specific category (e.g., the electrode has a specific function, the electrode is adjacent a specific type of electrical activity, the electrode corresponds to

coordinates specified by the user, etc.), and the absence of which indicates that the electrode does not fall within the specific category. In contrast, the stars illustrated in Fig. 32 of Willis '474 merely identify the positions of the electrodes. No other information about the electrodes is conveyed by the stars. Notably, Willis '474 indicates that the electrodes represented by the stars are recording electrodes, but this is because all of the mapping electrodes in this illustration are used as recording electrodes, and as such, the terms "recording" and "mapping" are used interchangeably. Again, no information besides the location of the electrodes are provided by the stars. There is no suggestion in Willis '568 that binary map designators can be used to distinguish the mapping electrodes illustrated in Fig. 32 of Willis '474, especially since all of these electrodes have the same function, i.e., they are all recording electrodes.

Notwithstanding the foregoing, independent claims 66, 74, 77, and 85 have been amended to further define the invention.

In particular, claims 66 and 77 have been amended to substantially incorporate the respective features recited in dependent claims 67 and 78, which have been cancelled by this amendment. Thus, independent claims 66 and 77 now require the electrode be identified and marked by the binary map designator based on physiological events monitored within the heart tissue. As such, even assuming that the combination of Willis '474 and Willis '568 teaches that the specific function of an electrode can be identified and marked by a binary map designator, there is no teaching that an electrode can be identified and marked by a binary map designator based on monitored physiological events within heart tissue.

Modification of the system of Willis '474 to include this feature is not an obvious design choice, as otherwise suggested by the Examiner on page 4 of the Office Action. There is clearly a functional and beneficial difference between identifying and marking an electrode based on its

specific function, and identifying and marking an electrode based on monitored physiological events, and thus, cannot be considered obvious design choices relative to each other. As stated on page 45, lines 5-17 of the specification, identification and marking of electrodes based on monitored physiological events allows the physician to more quickly identify potential ablation sites. Thus, this inventive feature clearly provides an advantage over prior art systems, and is not just a mere design choice.

Independent claims 74 and 85 have been amended to require the binary map designator to identify and mark an electrode, such that a pacing electrode within the plurality of electrodes can be distinguished from recording electrodes within the plurality of electrodes. As such, even assuming that the combination of Willis '474 and Willis '568 teaches that the specific function of an electrode can be identified and marked by a binary map designator, there is no teaching that an electrode can be identified and marked by a binary map designator, such that the pacing electrode can be distinguished from the recording electrodes. This is especially true, since all of the electrodes in Fig. 32 of Willis '474 are disclosed as being recording electrodes, thereby obviating the need to distinguish between a pacing electrode and a recording electrode amongst the array of electrodes.

Thus, Applicants submit that independent claims 66, 74, 77, and 85, as well as the claims depending therefrom (claims 68-73, 75, 76, 79-84, 86, and 87), are not obvious in view of Willis '474 and Willis '568, and as such, respectfully request withdrawal of the §103 rejection of these claims.

Conclusion


Based on the foregoing, it is believed that, with entry of this amendment, all claims are now allowable and a Notice of Allowance is respectfully requested. If the Examiner has any questions or

comments regarding this amendment, the Examiner is respectfully requested to contact the undersigned at (714) 830-0600.

Respectfully submitted,

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